DOCUMENT RESUME

ED 232 642 IR 020 030

TITLE	Millikan. MicroSIFT Courseware Evaluation.
INSTITUTION	Northwest Regional Educational Lab., Portland, Oreg.
PUB DATE	14 Mar 82
NOTE	2p.; In its: MicroSIFT Courseware Evaluations (1-87), 1982. See ED 226 765.
PUB TYPE	Reports - Evaluative/Feasibility (142)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Computer Assisted Instruction; *Computer Programs; Microcomputers; *Physics; Postsecondary Education; Problem Solving; Science Experiments; *Science Instruction; Secondary Education; Simulation
IDENTIFIERS	Apple II; Apple II Plus; Courseware Evaluation; *Electrons: Microcomputer Software and Info for Teachers; PF Project; Software Evaluation; *Software Reviews

ABSTRACT

THE FOLLOWING IS THE FULL TEXT OF THIS DOCUMENT (Except for the Evaluation Summary Table): VERSION: Copyright 1979. PRODUCER: Mentor Software, Inc., Box 8082, St. Paul, Minnesota 55113. EVALUATION COMPLETED: March 14, 1982 by the staff and constituents of Texas Region X Educational Service Center. COST: $19.95. ABILITY LEVEL: Grade 11+. SUBJECT: Physics: Millikan Oil Drop Experiment. MEDIUM OF TRANSFER: 5-1/4" flexible disk. REQUIRED HARDWARE: Apple II or Apple II+ with one disk drive. REQUIRED SOFTWARE: Applesoft, DOS 3.3. INSTRUCTIONAL PURPOSE: Standard instruction. INSTRUCTIONAL TECHNIQUES: Problem solving, simulation. DOCUMENTATION AVAILABLE: The computer program contains student instructions. Supplementary materials include the following: suggested grade/ability level(s), instructional objectives, prerequisite skills/activities, program operating instructions, teacher's information and student worksheets. INSTRUCTIONAL OBJECTIVES (Stated): Students will be able to describe the principles involved in the Millikan Oil Drop Experiment, and given the necessary experimental data, students will determine the charge on a single electron. INSTRUCTIONAL PREREQUISITES: (Inferred): Instruction in concepts underlying the measurement of an electron's charge. CONTENT AND STRUCTURE: This package provides a simulation of the Millikan Oil Drop Experiment. By varying voltage across plates, students find conditions that keep drops stationary. Listing and alteration of this program are not permitted. ESTIMATED STUDENT TIME REQUIRED: (Approximately) 20-30 minutes. POTENTIAL USES: The program may be used in a classroom setting to provide practice in working up a famous experiment without the hazards and costs of the necessary equipment to perform this complex experiment. The program may also be used as a demonstration, a pre-lab activity, or as an alternative to the school's actual laboratory experiment. MAJOR STRENGTHS: The program is an example of the use of a computer for an activity which is difficult to set up and carry out and for which a number of repetitions in a short time period is desirable but difficult using actual apparatus. MAJOR WEAKNESSES: The Millikan worksheet should have a space for percent of error. EVALUATION SUMMARY: Evaluators indicate they would use or recommend use of this package with little or no change. (Author)

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ED232642

Millikan

VERSION: © 1979

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Box 8082
St. Paul, Minnesota 55113

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EVALUATION SUMMARY

SA	A	D	SD	NA	
	•				Content is accurate.
	•				Content has educational value.
	•				Content is free of stereotypes.
	•				Purpose of package is well defined.
	•				Package achieves defined purpose.
	•				Content presentation is clear and logical.
	•				Difficulty level is appropriate to audience.
	•				Graphics/sound/color are used appropriately.
		•			Use of package is motivational.
		•			Student creativity is effectively stimulated.
	•				Feedback is effectively employed.

SA	A	D	SD	NA	
	•				Learner controls rate and sequence.
	•				Instruction integrates with prior learning.
		•			Learning can be generalized.
	•				User support materials are comprehensive.
	•				User support materials are effective.
		•			Information displays are effective.
		•			Users can operate easily and independently.
	•				Teachers can employ package easily.
	•				Computer capabilities are used appropriately.
	•				Program is reliable in normal use.

SA - Strongly Agree A-Agree D-Disagree SD - Strongly Disagree NA - Not Applicable

IR 020030

Evaluators indicate they would use or recommend use of this package with little or no change.

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This evaluation is based on the evaluations of three or more reviewers who are representative of potential users of the courseware package.

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